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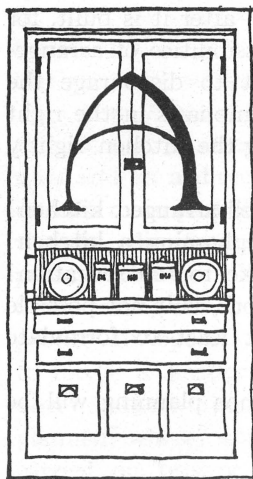
JULY, 1916

FARMHOUSE SERIES

LESSON 108

PLANNING THE HOME KITCHEN

HELEN BINKERD YOUNG



PHILOSOPHER once expressed the sentiment that until the needs of the body are either satisfied or ignored, the spirit cannot be free. Any attempt to live a rich and useful life brings home the force of this remark. Since it is obviously impossible to ignore the body, there remains the alternative of learning how to satisfy its needs. Naturally, the more simply and intelligently this is done, the better will be the welfare of the whole man. If the physical business of living can be accomplished with fitness and despatch, the spirit will be free to grow and to express itself. In this lies the real significance of home making.

With such a program, the focal point for mastery is the kitchen, for it is in truth the heart of the house, in whose labored or healthy action is registered the general tone of the home. Most willingly should one devote whatever time and effort are necessary to make the kitchen scheme sound, not only in convenience of arrangement but in general appearance as well. An attractive workshop stirs the imagination, adds zest to the task in hand, and reenforces the varied lessons of convenience. The whole atmosphere of the kitchen at length permeates the worker's thought and affects to a very real degree her general outlook on life. Brisk and direct habits of work breed brisk and direct habits of thought, and such coordination can best be cultivated in a workshop that has been designed with this end in view. If a convenient and pleasing kitchen could to-morrow be provided for every home in the land, many of the most irksome problems of housekeeping would soon vanish into thin air.

Any home maker should be able to plan a kitchen intelligently, just as she should know how to sew up a seam or balance her accounts. This does not mean a kitchen that seems convenient merely because it expresses certain pet whims, or ideas, but one that measures up to some standard tests on general essential points. It is of course extremely important to the work that there should be enough shelving, that the egg beater should be in the right place, and that the dishpan should live near the sink; but all details are of small moment when compared to such fundamental considerations as the size of the kitchen, the amount of light and air, and the general organization of the work. Too much or too little floor space, too many doors, too few windows, and too little wall space are basic matters that may break up the entire convenience of the place, no matter how perfect the details of equipment may be.

Naturally, it is too late to begin to plan a kitchen after it is built, for the structural conditions are then fixed and the possibilities of arrangement are accordingly limited. This is not meant to discourage the remodeling of old kitchens, but merely to put the emphasis in the right place and to force home the importance of planning the kitchen rightly at the start.

What, then, are the essentials of a convenient, well-arranged kitchen? What are the points to consider in planning or replanning a kitchen? What are the fundamental considerations that make for conservation? Because of the definite and uniform nature of the work, is it not possible to standardize the arrangement of kitchens, or at least to formulate a reasonable theory for their development?

From such a viewpoint, the fundamentals of kitchen planning will be discussed under seven heads:

1. Use or function of the kitchen
2. Exposure
3. General size
4. Doors
5. Windows
6. Arrangement of the equipment, based on the organization of the work
7. Pantries and closets

USE OF THE KITCHEN

Properly speaking, the kitchen is a scrupulously clean room intended for operations connected with food materials, and for this purpose only. It is not the province of the kitchen to provide space for eating, for washing and ironing clothes, for lavatory purposes, for removing boots, wraps,

and overalls, or for passageway from the back of the house to the front. For the sake of cleanliness and speed, such activities should be provided for elsewhere.

Tradition and custom to the contrary, it is poor logic and poor economy to plan for such features as laundry tubs and cleaning closets in the kitchen, for they are too unsanitary and too unrelated to food work to have a place there. Moreover, in order to include the laundry work, the kitchen must be made larger than it would otherwise need to be. How unreasonable it seems, to travel over this increased space seven days in the week for the sake of a piece of work that normally occurs but once a week. A sense of fitness suggests a separate room for laundry purposes, either in the basement or, as in the case of the farmhouse, on the same floor as the kitchen and adjacent to it. This room can also be used for the storage of cleaning materials and as a direct entrance into the main part of the house, thereby eliminating constant passage through the kitchen. So by taking out of the kitchen proper all operations foreign to foods, a smaller and more convenient room may be planned, where work may be carried on briskly and without interruption. Common sense has rung the knell for the large kitchen of many tasks.

Even in altering an old house, this idea of planning the kitchen proper for food work only, should be the guiding thought. Thus, a large kitchen in which the family washing has been done, should be remodeled in such a way that all food work is grouped at one end and laundry work and passage at the other end, with the stove as the common piece of equipment between. If the room is large enough for it, a thin partition wall may be used to complete the division. This makes a more cleanly and more economical arrangement than does the single large room with the two kinds of work crossing each other. Such a kitchen alteration is shown in figure 25.

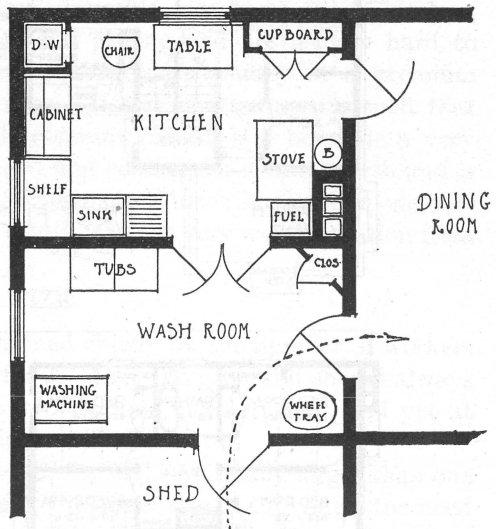


FIG. 25. A LARGE KITCHEN, 14 BY 18 FEET, SO REARRANGED THAT FOOD AND LAUNDRY WORK ARE SEPARATELY GROUPED, WHILE THE STOVE IS COMMON TO BOTH

The same idea of grouping the food work in an alcove and using the rest of the space for another purpose can be applied to a combination kitchen and dining-room, such as is shown in figure 26. This is again both a more sensible and a more convenient arrangement than spreading the cooking over a large space, running from wall to wall to get things, and serving a central table. The compact kitchen end could be made

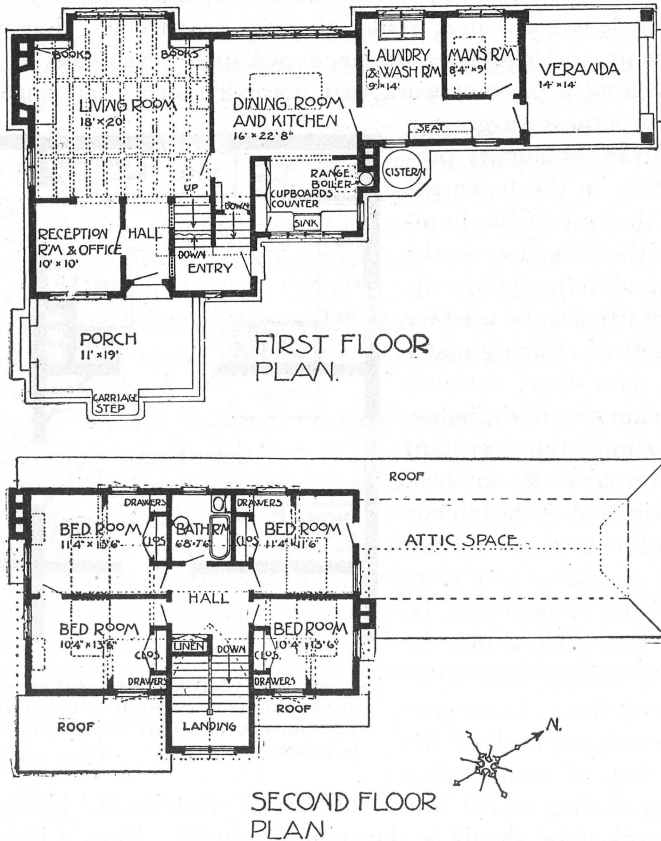


FIG. 26. A HOUSE PLANNED FRANKLY FOR FARM LIFE AND FARM CONDITIONS
Note particularly the combination kitchen and dining-room arrangement

light and washable in character, and the dining-room end more like a sitting-room, with passage through the room halfway between, thus disturbing the comfort of neither part.

It is evident from the foregoing explanation that the intelligent planning of a kitchen involves a number of side issues, which, in the case of the farmhouse, unite to make of it a very complex problem. If the kitchen is to

become a compact, businesslike compartment for one use only, the entire working arrangements of the house must be thoroughly studied in order to make sure that there is a definite place allotted to every need (Fig. 30).

EXPOSURE

The location of the kitchen will of course depend on the remainder of the house plan and on the location of the other rooms. Theoretically, the best exposure and location for a kitchen is toward the north, the northeast, or the northwest, with at least two outer walls for light and air. This implies either a corner location or a separate wing. South, southeast, and southwest are less desirable exposures for a kitchen, because they are likely to be hot and glaring and are usually hard to ventilate. Furthermore, southern exposures are usually at a premium for the more important living-rooms. If the arrangement is such that the kitchen can have but a single exposure, it can still be made a very comfortable one as regards light, air, and coolness, if it faces north and is provided with plenty of windows; whereas, a kitchen having but one outside wall, and that facing directly south, is in the very worst situation from every viewpoint.

SIZE

The size of the kitchen is determined chiefly by the number of workers and by the kind of fuel to be used for cooking. In general it should always be large enough to accommodate two workers in emergency, and yet at the same time as small as convenience will allow.

A kitchen in which coal is to be used for fuel is normally larger than one in which gas is to be used, because of the larger size of the range, the need for a convenient supply of fuel, and the fact that for reasons of comfort the other pieces of furniture cannot be placed too near the stove. Years of experience in planning, equipping, and using kitchens under conservation methods, show that a gas-fuel kitchen with a pass pantry need not exceed 150 square feet of floor space, and that a coal-fuel kitchen, together with a pass and food pantry, ordinarily need not exceed an area of 200 square feet of floor space. This area may be arranged in such shapes as 9 by 12 feet, 10 by 12 feet, 10 by 13 or 14 feet, 11 by 11 feet, 11 by 12 or 13 feet, or 12 by 12 feet, for the kitchen proper, and 5 by 7, 8, 9, or 10 feet, or 6 by 6, 7, or 8 feet, for the pantry, according as these measurements best fit into the plan for the rest of the house. In general, approximately square shapes for kitchens and pantries are more convenient than are long, narrow ones. Eight feet should be the minimum width for a kitchen.

Of course the areas given are merely guides to help determine the probable amount of space needed for kitchen developments and to serve as

a sort of check on wasteful or crowded planning. It is very easy to plan a kitchen that is too large; it is also possible to plan a kitchen that is too small, where freedom of motion is cramped and where one tires of standing always in one place or position. If one's energies are to be neither squeezed nor squandered, common sense must always control the decision.

DOORS

After the size and the location of the kitchen have been determined, the placing of the openings is the next step to be considered. The subject of doors especially should be given the most deliberate attention, for the inconvenience of many a kitchen can be traced back to the presence of too many or wrongly placed doors.

Indeed, doors are a common complaint with kitchens. Often as many as five, six, or seven doors may be found in the room, thereby breaking up the wall space and inviting passage in all directions. The result is scattered equipment and interrupted work. Continuity of equipment and absence of cross passage are the very essence of a well-planned work space. To further such an arrangement, wall space is the necessary, and doors are the objectionable, feature. Therefore every time a door is cut, one should remember that a piece of wall space is divided in two and that a new path of travel is established between two points. If at the time a kitchen is being planned a diagram were used with dotted lines to indicate the paths of travel between doors, many an inconvenient situation would be avoided.

It is evident, then, that a kitchen should have as few doors as possible, in order to avoid breaking up the wall space and to avoid passage through the kitchen to different parts of the house. Ordinarily, five or six doors are needed in connection with the kitchen work: an outside door, a pantry door, a cellar door, a door to the dining-room, and perhaps one leading to a rear stairway or hall. Fortunately, all these doors need not be located in the kitchen proper. Different combinations can be arranged whereby one door can be made to serve two or three purposes. Thus, the cellar or the rear-stair door might open from a pantry or from an outside entry, which might also contain the outside door. Two or three doors of passage are all that are needed in a well-planned kitchen. These should, as nearly as possible, be arranged at one side, corner, or end, thus leaving a continuous wall space in an alcove form for the arrangement of equipment.

WINDOWS

The function of a window is essentially twofold — to admit light and air. Naturally that arrangement of windows will be most reasonable which

provides for the best diffusion of light and the best ventilation with the least amount of glass space. For, while it is poor economy to have too few windows, it is also poor economy to have too many.

It has been found that for effective results, a sort of flexible relation exists between the amount of window space to be used and the size of the room to be lighted. Accordingly, the total window area for a kitchen should in general be about twenty-five per cent of the floor area. For example, a kitchen 11 by 11 feet, having 121 square feet of floor area, should be provided with about 30 square feet of window space, arranged on the two outer walls. This space may be divided into two windows 3 by 5 feet each, or three windows $2\frac{1}{2}$ by 4 feet each, or three windows 2 by $4\frac{1}{2}$ feet each, as the case may require. The necessary window space for any given kitchen may be thus approximated.

Ordinarily, kitchen windows should be located as far apart as possible. In the case of a corner exposure, they should be placed near the partition walls rather than near the corner of the house. This arrangement insures a strong diagonal sweep of air and an even distribution of light. The tops of the windows should be not more than a foot from the ceiling, so that the rising heat and odors can easily escape. Broad, short windows, built high from the floor, are an excellent type for kitchen use. The distance from the floor to the sill should be from three to four feet, in order to allow for table space beneath the windows. While not so picturesque as casements, double-hung windows are usually the easier type to operate in a kitchen.

ARRANGEMENT OF EQUIPMENT

Having planned the kitchen that is structurally suited to its use, further convenience depends on the arrangement of the furniture, or equipment. In this, as in the case of any industry, the aim should be to do the most work in the least time without friction and with the fewest workers.

Briefly stated, the equipment should line the walls, leaving a free central space for working. Theoretically, every change in working level, whether of floor or table, and every gap between two pieces of equipment, cause loss of efficiency; that is to say, the more continuous the arrangement of equipment, the more convenient will be the work. Having dispensed with all unnecessary doors and deliberately preserved one or two continuous wall spaces, the disposition of the equipment becomes an easy matter. Indeed, it would be difficult to make a really inconvenient work-place of a compact, well-lighted kitchen of limited size, having few doors and generous wall spaces, such as has been previously described. But in order to reach a standard of maximum convenience, the work and the equipment should be organized so that all things pertaining to a given operation are grouped together.

The three indispensable pieces of furniture in any kitchen are the table, the stove, and the sink or a temporary equivalent. These represent the three essential operations carried on there: the preparation of the food, the cooking of the food, and the cleaning-up process that follows. This work and this equipment form the nucleus of three operation centers: (1) the food center, (2) the heat center, and (3) the water center. This organization is the basis of convenient arrangement for every home kitchen, large or small, whether it belongs to apartment, suburban home, or farmhouse.

1. The food center requires the following equipment:

- a. Table space, from 8 to 12 square feet exclusive of sink boards
- b. Storage space

1. For cold foods..... { Ice box
Dumb-waiter
Food pantry
(Any or all of these)
2. For dry supplies and utensils needed in food preparation { Drawers and shelves
(In form of closet or cabinet)

2. The heat center requires the following equipment:

- a. Stove or range, from 2 by 3 feet to 2½ by 5 feet
- b. Storage space... { Fuel box or bin, if coal or wood is to be used
Pan closet for utensils
Water boiler

3. The water center requires the following equipment:

- a. Sink, 2 by 3 feet, more or less
- b. Drain board, 8 square feet or more — part to right and part to left of sink
- c. Storage space for china and utensils { Shelves and drawers
(In form of china closet and pan closet)

The food center should, if possible, be located on an outer wall, with the sink and range centers on inside walls and with light coming from the side. Ordinarily, the position of the dining-room and the location of the main chimneys of the house determine the general location of the sink and the range, respectively. The sink should be near or next the dining-room wall, so that meal service involves a short path of travel and but one handling of dishes.

If possible, the food and water centers should be combined into one arrangement, so that all the table space, such as the table top, the cabinet

shelf, and the drain board, forms a continuous work shelf on the same level. For the sake of comfort, this level should be higher than the 30 inches usual for table and sink. A height of from 32 to 35 inches will be found convenient for most workers, 34 inches being a safe dimension for persons of varying heights. This means that the edge, or roll, of the sink should be set at that height from the floor.

Ordinarily the stove or the range is the one piece of equipment that should be set somewhat apart. It may even be conveniently placed in a detached position on a separate wall space, partly because the other work is more comfortable if the stove is not too near, and partly because the design of stoves is such that two or three sides must be accessible to the worker. In general, then, the stove should not be located too near the other pieces of equipment, for it will crowd the work and make ugly corners to clean.

The question is often asked whether movable or built-in equipment is preferable. While the use of either sort can be made entirely convenient in arrangement, there is much to be said in favor of built-in equipment as far as cleanliness and appearance are concerned.

In the latter case, there are no cracks behind or under the furniture, and, consequently, the moving of heavy articles is unnecessary in cleaning. A table, a stove, and a cabinet, all separate and standing on legs or casters, quite evidently make the problem of a clean floor more difficult than if the cabinet and the range were set directly on the floor and the table space was supplied by drain boards or a shelf. Also, the appearance of the place is simpler and more restful with the built-in pieces. However, no one should feel discouraged in the effort to have a satisfactory kitchen merely because circumstances are such that separate pieces must be used.

The plan of a farmhouse kitchen that has been developed in accordance with the principles of kitchen planning previously described is shown

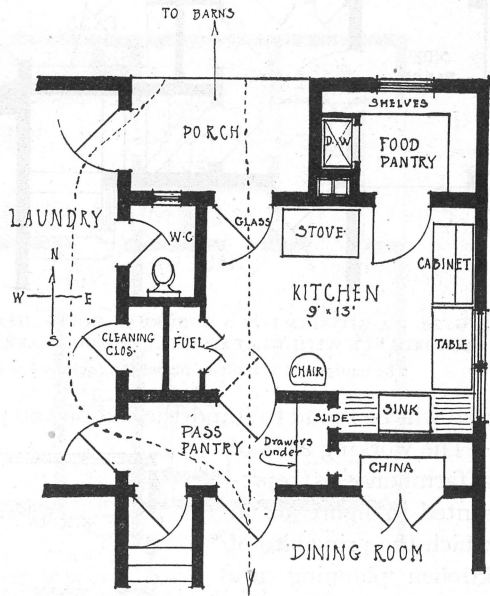


FIG. 27. A FARMHOUSE KITCHEN THAT DEMONSTRATES THE PRINCIPLES OF SOUND PLANNING
The equipment is movable; the fuel used is coal

in figure 27. It will be found to work out satisfactorily on each of the

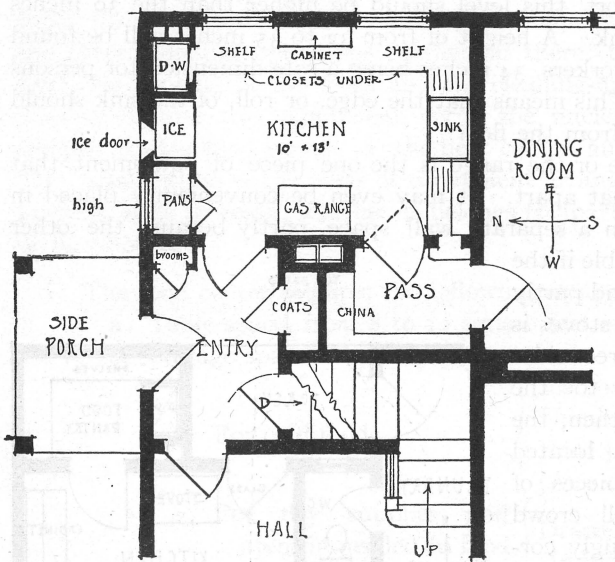


FIG. 28. A KITCHEN FOR A SUBURBAN HOUSE, DEVELOPED IN ACCORDANCE WITH THE PRINCIPLES OF GOOD ARRANGEMENT
The equipment is built in place; the fuel used is gas

essential matters of use, location, size, number and location of doors, number and location of windows, and organization of work. In this kitchen, coal or wood is used for fuel, and the equipment is movable.

In figure 28 is shown the arrangement of a kitchen in a suburban house taken from the plan shown in figure 29. In this case, gas is used for fuel, and the equipment is built in. This arrangement

also will be found to stand the test on the points essential to good planning.

The working area of a farmhouse is represented in figure 30, in which the principles of kitchen planning are clearly expressed. The relation of the kitchen to the dining-room, the porch, the pantry, and the washroom, should first be noted, after which size, location, openings, and general equipment may be studied.

This kitchen has a corner location on the plan, with the food pantry and one wall exposed in a northerly direction. The kitchen proper

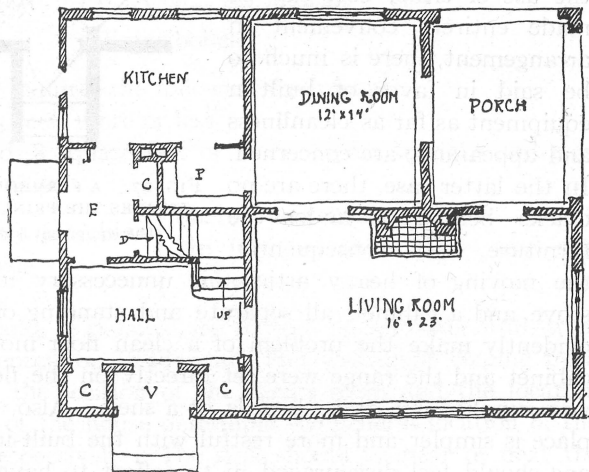


FIG. 29. FLOOR PLAN OF THE HOUSE FROM WHICH THE KITCHEN IN FIGURE 28 IS STUDIED

proper

represents an area of 130 square feet and the pantry an area of 45 square feet. The number of doors has been reduced to two, which are placed adjacent so that travel from the porch occurs around a corner and not across the working center. The most direct passage from the barns lies through the washroom, as should be the case. The windows of the kitchen, which are placed high, light the working area sufficiently and provide good ventilation. Moreover, if it is needed, a complete sweep of air may be obtained from end to end by opening the two pantry doors, over either of which a transom may be built. Both these doors are glazed, in order

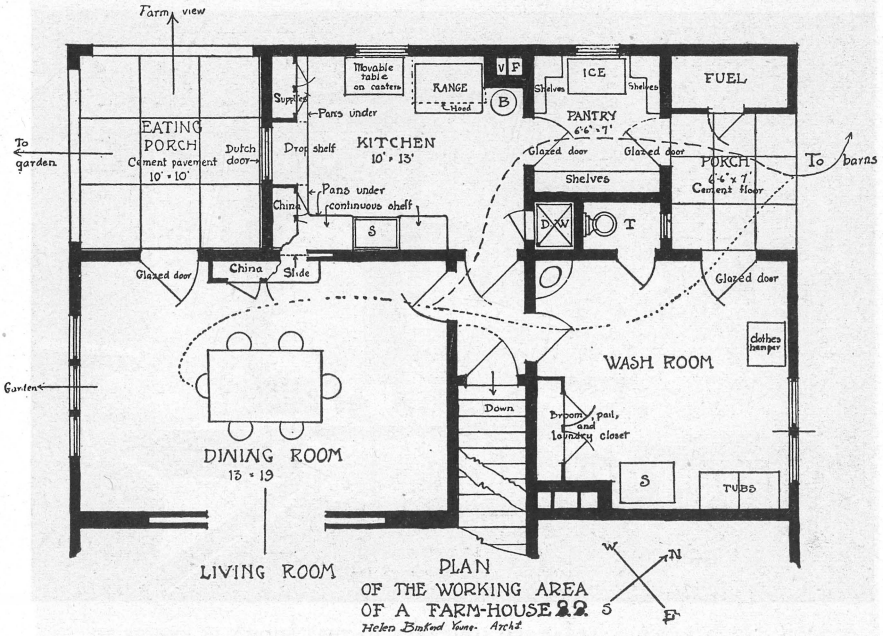


FIG. 30. PLAN IN WHICH PRINCIPLES OF KITCHEN ARRANGEMENT ARE CLEARLY EXPRESSED

to afford light and view. A fuel compartment is conveniently located for either kitchen or washroom. An eating porch, looking toward the garden and the sunset, occupies the corner angle between the kitchen and the dining-room. The kitchen and the porch connect with a Dutch door, so that outdoor meals are easily served. Extra food and extra fuel are stored in the cellar, whence they are delivered by a dumb-waiter, or lift.

The purpose of a washroom is to save the other parts of the house. Here all dirty and occasional forms of work may be done. The room is equipped for the family washing and ironing, and stores such general cleaning

apparatus as brooms, pails, and vacuum cleaner. Here, also, men coming from the barn may remove muddy boots and overalls, and may clean up before going to the table. Such feeding pails for stock as are brought to the house should be deposited here, not taken into the kitchen. In this room, also, the children may blow soap bubbles, wash dolls' clothes, sail boats, hammer, and play at many games that delight their hearts but that create disorder in the house. Considering the nature of this room and its many uses, it should be made as large as can be afforded, and should be provided, if possible, with a cement floor and a painted

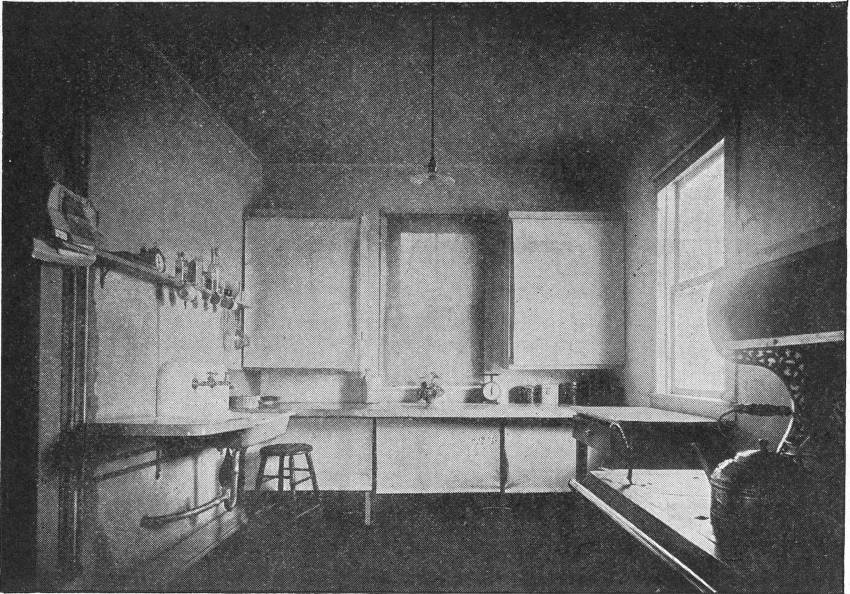


FIG. 31. A KITCHEN ARRANGED SIMILARLY TO THAT SHOWN IN FIGURE 30
Oilcloth shades instead of doors are used on the working cabinet

wall so that splashing will not injure it. The room shown in figure 30 is in reality the old washhouse and woodshed, fitted more completely than formerly, and is an important part of the plan.

PANTRIES AND CLOSETS

No part of the kitchen equipment has been so evaded in planning as has accurate and systematic storage space. The habit has been acquired of using every corner and tuck-away place for a closet, the idea being that the more closets there were, the greater would be the convenience. Such loose planning is however false reasoning and not at all in line with those intensive methods that make for economy of work. Too much or inac-

cessible storage space invites slack housekeeping and is therefore more destructive to the general scheme than is too little closet room. Limited storage space compels one to organize, to eliminate, and to arrange compactly, the general result thereby favoring conservation. Only such storage space should be planned as is really needed to complete and assist the operation of the kitchen.

Broadly speaking, there are three general types of storage space that may be used in connection with the kitchen arrangements: (1) the pantry,



FIG. 32. THE SAME KITCHEN SHOWN IN FIGURE 31

The shades of the cabinet are raised when the room is in use

(2) the cupboard filled with shelves, and (3) the cabinet, or dresser. Of these three, the pantry is by nature the most capacious, the cupboard next, and the cabinet least. An analysis of these three forms should enable one to plan intelligently the storage space for an individual kitchen.

The pantry may be defined as an enlarged closet through which one passes or into which one steps instead of merely reaching. Its purpose is primarily to furnish more generous storage space than is provided by the ordinary cupboard. There are in general two types of pantries, the food pantry and the pass pantry. The food pantry is intended primarily for the storage of food supplies that must be kept cooler than the tem-

perature of the kitchen. The pass pantry — butler's pantry being an absurd name when used in connection with a modest house — is used for the storing of china and for the serving of meals. Often these two pantries can be combined into one without breaking up the organization of the work.

Whether a food pantry, or a pass pantry, or both, or a combination of the two shall be planned for any given house, depends on the conditions of that special case. In general, a food pantry is always needed when coal is used for cooking, because the temperature of the kitchen then becomes so warm that certain foods will not keep; whereas, when gas is used, the temperature is likely to be fairly cool and even, which often allows for the food pantry to be replaced by an ice box, a dumb-waiter, or both, placed directly in the kitchen. If the ventilation of the room is good, such an arrangement will require hardly a dollar's worth more ice a year than the amount that would be needed if the refrigerator were placed in a separate entry or pantry or on an outer porch.

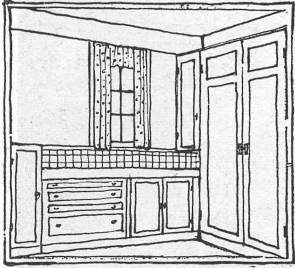


FIG. 33. THE PASS PANTRY, OR SERVING-PANTRY, SHOWN ON PLAN IN FIGURE 35

If the family is large, however, or the house located at a distance from the markets, a food pantry is almost necessary to store sufficient supplies. Often one tier of shelves in the food pantry is reserved for utensils, which makes a separate cupboard unnecessary. Owing to the nature of its use, the food pantry should preferably be located on a northerly outside wall and should be provided with a window.

The pass pantry is for several reasons an almost invaluable adjunct to the kitchen. Not only does it provide closet space for china and aid the smooth serving of meals, but it also shuts off the noise and the odors of the kitchen from the rest of the house. Many persons disregard this, thinking it is a feature of no valid importance, but that is because they fail to realize that a plan of true conservation aims to protect one against the intrusion of unwelcome sights, sounds, and smells, as well as to protect one against unnecessary labor. Unconsciously, the nervous system pays toll for intrusions that come through the senses, and there is no reason why those who are engaged in other tasks about the house should be continually reminded of the kitchen work. In such a situation there is no rest; the bones of housekeeping rattle on every side. Rather than this, it is wise to give place to a few features that purposely aim at peace and refinement.

Owing to the nature of its use, the pass pantry should be located on the partition wall between the dining-room and the kitchen. It is of course desirable, but not really necessary, to arrange the pass pantry

so that it touches the outer wall and is provided with a window. Where this is impossible, an inside serving-pantry painted white and lighted through a glass panel in the door leading to the kitchen, will be found to be light and satisfactory (Figs. 27 and 28).

Sometimes in place of, or in addition to, the pass pantry, a china closet opening both ways is built into the wall between the dining-room and the kitchen (Fig. 30). Many persons consider this a very desirable arrangement, but it must be remembered that, although convenient, such a feature destroys the quieting effect of the pass pantry. Wherever there is direct communication between the dining-room and the kitchen, there is danger of noise and odors. Usually, some other arrangement could have been devised that would have been just as convenient. One could hardly imagine a more simple or direct arrangement for meal service than is shown in figures 27 and 28, where the pass pantry is used and there is a slide through to the sink drain board. In neither case are the dishes carried across the kitchen; they are delivered, washed, and returned within the shortest possible line of service.

Glass china closets and plate rails should be used sparingly in the design of the dining-room; it is more restful and more in keeping with the sentiment of the home to have the china stored out of sight when not in use than to keep it forever on display. To be sure, a glimpse of china through glass panels can be a very decorative note in a dining-room, provided it is modestly, not showily, carried out.

The cupboard — a closet filled with shelves — is a valuable place of storage for pans, china, or supplies. If intelligently shelved, it can be made almost as capacious as a small pantry.

The arrangement of shelving is perhaps the most important feature in the planning of storage space. For the best results, shelves should be designed only wide enough to hold comfortably one row of supplies, of whatever kind considered. An arrangement of narrow shelves spaced close together will prove to be more capacious, accessible, and easy to clean than wide shelves spaced far apart. From every standpoint, deep shelves are a great mistake, because one must then arrange for two or three rows of materials in order to use the space. The natural result is that unused odds and ends are allowed to accumulate at the back of the shelf, while the front row only is easy to see and reach; hence only about half of the shelf width is really effective. In other words, if the shelf were sawed lengthwise in two and one piece placed above the other, the arrangement would be both more sensible and more encouraging to neat habits.

It will be found that the area of comfortable reach is between one and six feet from the floor, leaving about five feet of quickly available space. For the sake of efficiency, this space should be as compactly shelved as is

feasible for the use intended. A cupboard provided with one or two broad shelves below and a series of narrower shelves above, will hold an amazing number of articles, both effectively and accessibly displayed. If one but takes the trouble to measure, it will be found that very few utensils, dishes, or supply packages are more than ten inches across, and that many articles require only six, seven, or eight inches of shelf space. A cupboard with doors for pans, china, or supplies is therefore ample if made from 10 to 15 inches deep; a series of open shelves, if made from 8 to 10 inches deep. Shelves as narrow as 6 inches are good for single rows of

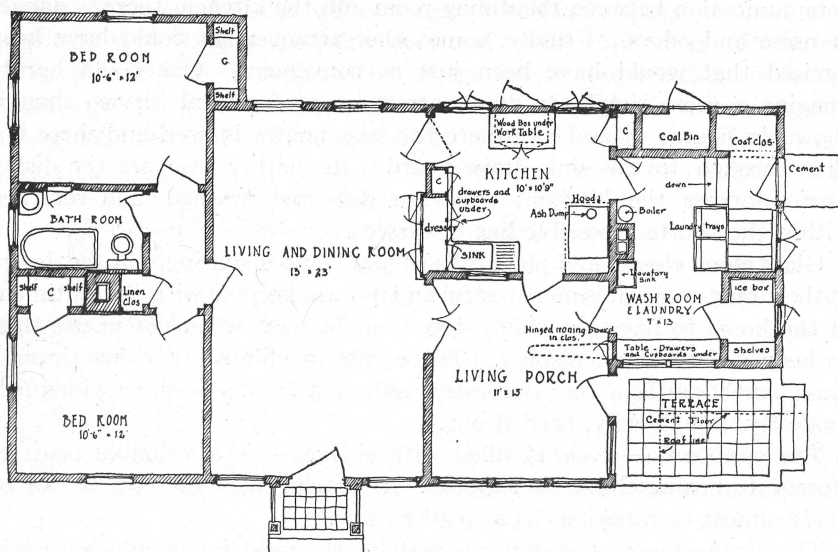


FIG. 34. A SMALL FARMHOUSE ARRANGED ON A SINGLE FLOOR, WITH A CELLAR BENEATH FOR THE FURNACE AND FOR VEGETABLE STORAGE

Note the thoughtful arrangement of the working parts—an excellent illustration of convenience of labor, economy of space, and completeness of equipment. This is one of several plans for small farmhouses worked out by the Division of Rural Engineering, Office of Public Roads and Rural Engineering, United States Department of Agriculture, and heretofore unpublished

dry supplies. From 7 to 10 inches between shelves is a safe average distance for spacing; but in order to make the most out of a given space, it is best to think out carefully the materials that are to be stored, and to space the shelves accordingly.

The kitchen cabinet, or dresser, brings a new element into the storage arrangement. It introduces a work shelf at table height, thereby dividing the storage into an upper and a lower part. The deep under part may be arranged for either closet or drawer space; the upper part may be arranged as a shallow cupboard for supplies.

Since one must stoop to see and reach its contents, the deep under closet cannot be considered a very economical arrangement from the standpoint

of effective storage. The most valuable form of storage for the lower section of a cabinet is an arrangement of drawers, for these pull out and expose their contents from the top so that one need not stoop to reach them. There is, however, a strict limit to the sort of kitchen or pantry supplies that can be housed conveniently in drawers. From four to six well-planned drawers will be found adequate for the ordinary kitchen: a broad, shallow drawer subdivided for small utensils, such as knives, forks, spoons, egg beaters, and the like; a deeper drawer for kitchen linen, such as towels, clean cloths, aprons, and the like; and two or three deep, narrow drawers, or bins, for storing flour, sugars, and other dry supplies of a bulky nature.

Appropriate drawer space for the pass pantry is about as follows: a broad, shallow drawer with subdivisions for the different kinds of table silver; one, two, or three broad, shallow drawers for table linen; and a deep drawer for miscellaneous needs, containing perhaps a compartment for string, one for wrapping paper, and so on.

It should be realized from the foregoing discussion that the cabinet, or dresser, is an appropriate form of storage only when table space is needed also; that is, the emphasis is here placed on the work shelf rather than on the storage capacity. To equip a pantry, whose function is to furnish maximum storage space, with closets of the dresser type is therefore a mistake, since it furnishes an excess of table space at the expense of cupboard room. An ordinary cupboard or a series of open shelves, supplemented by a small table or work shelf with drawers below, is a much more appropriate arrangement than to break up the most valuable part of the storage space by the intrusion of a work shelf. The cabinet form is chiefly valuable in the kitchen proper.

It is impossible to dismiss the subject of kitchen storage without emphasizing the usefulness of the dumb-waiter. This is an almost indispensable convenience where a portion of the cellar is used for food supplies. What a waste of effort it is to carry the family provisions to and from the cellar, when it would be much easier to cut a hole in the floor, let them all down at once, and pull them up again when needed. Thus, the dumb-waiter becomes, in essence, a pantry on a string, making short-cut trips between the cellar and the kitchen. An errand boy that will carry wood, coal, and food between floors, is a labor-saver of no mean pretensions. With such an arrangement, a cold part of the cellar may be relied on as an excellent substitute for the food pantry, even taking the place of an ice box satisfactorily. One trip a day to the cellar is enough to keep the lift supplied.

INTERIOR FINISH

To sum up the whole matter, any kitchen that is to give full satisfaction must be sound in arrangement, slightly in appearance, and smooth in opera-

tion. Within reasonable limits, anything that can be devised to enforce this triple standard, must be considered worthy of trial. The demands of convenience will of course always come first, thereby deciding matters of arrangement and of management; but the less insistent needs for a work place that shall be a fit and lovely spot, must also be met with a ready hand. So surely are all persons creatures of environment that there is no estimating the vitality that would be conserved if all cooking were done in truly beautiful kitchens. A clean, level floor, walls and furniture with smooth washable surfaces, and a pleasing color scheme are elements that eliminate mental friction and that add the touch of refinement which makes

of any work a joy.

Up to the present time, no perfect flooring that is cheap enough for use in private homes, has been invented. The materials most available are wood and linoleum. Of the two, linoleum is thought to be preferable, because it can be cemented tight to the under floor, it is practically crackless, and it is quiet and easy to walk on. Plain brown "battleship" linoleum is a reliable, standard product, or

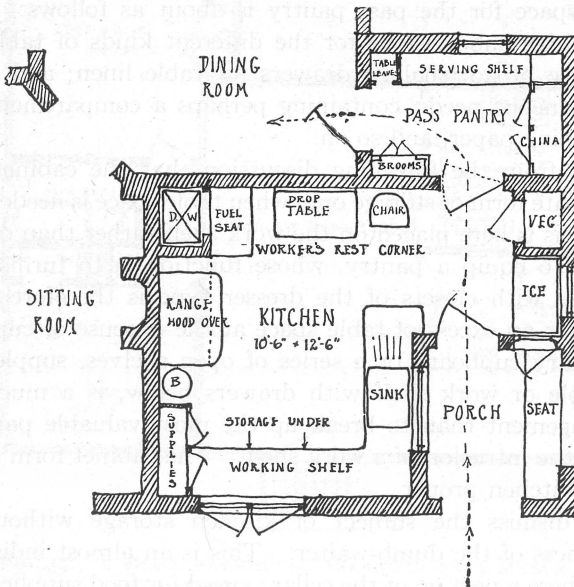


FIG. 35. A COMPLETE AND CONVENIENT KITCHEN FOR ANY HOUSE

a modest inlaid pattern may be used instead. Experienced housekeepers claim that linoleum with a pattern is both more attractive and easier to keep clean than is the plain color. Although good linoleum is not cheap floor covering, its satisfactory and lasting nature commends it in spite of its cost.

A maple or a beech floor of narrow boards is the next best thing. Yellow pine and oak are too open grained to make a satisfactory floor for kitchen use. Maple and beech are both light in color and do not make a very good looking floor under hard use, but they can at least be scrubbed and kept clean, which is the main point. A maple floor should be finished by saturating it with hot linseed oil for a number of hours; then all the extra

oil should be thoroughly wiped up. In this way, the wood is practically impregnated against the absorption of grease.

Kitchen woodwork should be plain, with as few grooves and moldings as possible. Wooden wainscotings in kitchen and bathroom are an abomination from every viewpoint and are not used in sanitary, modern building.

For the interior finish of the kitchen, nothing is comparable to clean, light-colored paint for walls and woodwork. Warm grays, buffs, and other soft, neutral tints may be used. Sometimes walls, woodwork, and furniture are all painted the same color, thereby uniting the whole effect. Even ready-made cabinets, tables, and refrigerators are far more attractive if painted a light color.

A kitchen finished in stained oak or varnished pine, like the rest of the house, is unnecessarily monotonous. It should be differentiated from the other rooms in color scheme and general atmosphere, for it is made different by its work. Merely to enter a kitchen where the whole aspect is clean, crisp, and light, is a refreshing experience. Light colors, mixed on a basis of white, are not only cheering and restful to look at, but have the further advantage of reflecting and distributing the light so that there are no dark corners.

Such a room becomes also an easy and economical one to light well at night. Where gas or oil lamps are used, light colors are positively invaluable in the kitchen. Each wall then becomes in reality a huge reflecting surface, so that a given amount of light is virtually used several times over. If an electric fixture for indirect lighting — an inverted metal bowl — is placed centrally on a white ceiling, the entire kitchen is evenly lighted so that there are neither heavy shadows nor dark corners to impede the work. Naturally, the lighter the general color scheme, the less the current that will be needed. Light colors may therefore be considered as having a practical, as well as an æsthetic, value.

The sentiment that clings to the old-fashioned kitchen dies hard; yet one has but to pause and recall the dreary undertone of the old house-keeping to realize how much to be desired is the wholesome trend of the new.

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